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09/820,008	03/29/2001	Tomohiko Ogishi	0965-0343P	4067

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EXAMINER

VU, THONG H

ART UNIT PAPER NUMBER

2142

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,008

Applicant(s)

OGISHI ET AL.

Examiner

Thong H Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/29/01</u> | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1-12 are pending.
2. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. §103 as being unpatentable over Susai et al [Susai 6,411,986 B1] in view of Packer [5,802,106].

4. As per claim1, Susai discloses a method for collecting statistical traffic data comprising steps of:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting a DATA segment, which belongs to same connection as the detected SYN segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35; reusing the server connection, col 6 line 63-col 7 line 29]; and

obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN segment [Susai, detected GET packet, col 7 lines 5-30], and an amount of transmitted bytes at said side [Susai, SYN flag and GET segment length, col 8 lines 5-65]; wherein said amount of transmitted segment being obtained by counting a

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amount of said detected DATA segment, and said amount of transmitted bytes being obtained by calculating difference between a sequence number of the first detected DATA segment [Susai, the length of data, col 8 lines 1-5], and a sum of a sequence number of the last detected DATA segment and a user data length of said last detected DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52].

However Susai does not explicitly detail the calculation using the first, last segment and counting amount of segment. It was obvious to a skilled artisan using a simple mathematic to obtained a number of transmitted packets either using the first and last sequence numbers of the packets or the length of the last packet segment to calculate the amount of transmitted bytes [Packer, col 3lines 1-34; col 4 lines 10-col 8 line 11].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the calculating first ACK, last ACK or the data length (i.e.: size) with latency, rate to calculate the traffic over network as taught by Packer into the Susai' s apparatus in order to utilize the collect data over network.

5. As per claim 3, Susai-Packer disclose method for collecting statistical traffic data comprising steps of:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

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detecting an ACK segment and a DATA segment, each of which belongs to same connection (i.e.: re-use) as the detected SYN segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

calculating, as an amount of received data at a side which sent the detected SYN segment, a difference between an acknowledgment number of the first detected ACK segment (or DATA segment) and an acknowledgement number of the last detected ACK segment (or DATA segment) [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; ACK number col 8 lines 5-64] [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48]

6. As per claim 2, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting a DATA segment, which belongs to same connection as the detected SYN-ACK segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35, Fig 6A-6B]; and

obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN-ACK segment, and an amount of transmitted bytes at said side [Susai, SYN flag and GET segment length, col 8 lines 5-65];

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wherein said amount of transmitted segment being obtained by counting a total amount of said detected DATA segments, and said amount of transmitted bytes being obtained by calculating a difference between a sequence number of the first detected DATA segment [Susai, the length of data, col 8 lines 1-5], and a sum of a sequence number of the last detected DATA segment and a user data length of said last detected DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52] [Packer, col 3lines 1-34; col 4 lines 10-col 8 line 11].

7. As per claim 4, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting an ACK segment and a DATA segment, each of which belongs to same connection as the detected SYN ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

calculating, as an amount of received data at a side which sent the detected SYN ACK segment, a difference between an acknowledgment number of the first detected ACK segment or DATA segment and an acknowledgement number of the last detected ACK segment or DATA segment [Susai, calculated the sequence number and

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checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52] [Packer, col 3 lines 1-34; col 4 lines 10-col 8 line 11].

8. As per claim 9, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting continuous plural DATA segments and continuous plural ACK segments in succession to the DATA segments, all of which belong to same connection as the detected SYN segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

obtaining at least one of an HTTP response time at a side which sent the detected SYN segment, and an HTTP throughput at said side [Susai, reusing the server connection or HTTP connection, col 6 line 63-col7 line 29];

wherein said HTTP response time being obtained by calculating a time difference from the last detection of the DATA segment to the first detection of the ACK segment, and said HTTP throughput being obtained by calculating a ratio of a difference, between an acknowledgement number of the first detected ACK segment and an acknowledgement number of the last detected ACK segment, to a time difference from the first detection of the ACK segment to the last detection of the ACK segment [Susai,

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calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52] [Packer, col 3 lines 1-34; col 4 lines 10-col 8 line 11].

9. As per claim 10, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting continuous plural ACK segments and continuous plural DATA segments in succession to the ACK segments, all of which belong to same connection as the detected SYN-ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col 7 line 29]; and

obtaining at least one of an HTTP response time at a side which sent the detected SYN-ACK segment, and an HTTP throughput at said side [Susai, looking for a response time which avoid wasting CPU time, col 1 line 64-col 2 line 5]; wherein said HTTP response time being obtained by calculating a time difference from the last detection of the ACK segment to the first detection of the DATA segment, and said HTTP throughput being obtained by calculating a of a difference, between a sequence number of the first detected DATA segment and a sum of a sequence number of the last detected DATA segment and a user data length of the last detected DATA segment, to a time difference from the first detection of the DATA segment to the last detection of the DATA segment [Susai, calculated the sequence number and checksum,

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the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52] [Packer, col 3lines 1-34; col 4 lines 10-col 8 line 11].

10. As per claim 11, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting continuous plural ACK segments, which belong to same connection as the detected SYN-ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

calculating, as an FTP throughput at a side [Susai, FTP, col 4 lines 50-61]which sent the detected SYN-ACK segment, a ratio of a difference, between an acknowledgement number of the first detected ACK segment and an acknowledgement number of the last detected ACK segment, to a time difference from the first detection of the ACK segment to the last detection of the ACK segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52] [Packer, col 3lines 1-34; col 4 lines 10-col 8 line 11].

11. Claim 12 contains the similar limitations set forth of claims 1 and 11. Therefore, claim 12 is rejected for the similar rationale set forth in claims 1 and 11.

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12. Claims 5 and 6 contain the similar limitations set forth of claim 1 and 2, respectively, except adding 1 to the last obtained amount of re-transmitted segment [Susai, the next sequence number (or re-transmitted segment) is a sequence number plus one, col 5 lines 8-20]. Therefore, claims 5-6 are rejected for the similar rationale set forth in claims 1 and 2.

13. As per claim 7, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of :

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting an ACK segment, which belongs to same connection as the detected SYN segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35; reusing the server connection, col 6 line 63-col7 line 29];

determining an acknowledgment number of an ACK segment to be sent next and a window size (i.e.: data length) of an ACK segment having the maximum acknowledgement number, at every detection of the ACK segment, based on an acknowledgment number of the detected ACK segment [Susai, maximum offload, col 6 line 59-col 7 line 30];

judging, at every detection of the ACK segment, whether both of an acknowledgement number and a window size of the newly detected ACK segment are equal to said determined acknowledgment number and said determined window size at

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the last ACK segment detection [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52];

obtaining, when both of the acknowledgment number and the window size of the newly detected two or more ACK segments are equal to said determined acknowledgement number and said determined window size, a new amount of missing DATA segment at a side which sent the detected SYN segments, by adding 1 to the last obtained amount of missing DATA segment [Susai, the next sequence number is a sequence number plus one, col 5 lines 8-20] [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

14. Claim 8 contains the similar limitations set forth of apparatus claims 2 and 7.

Therefore, claim 8 is rejected for the similar rationale set forth in claims 2 and 7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (571) 272-3896. The fax number for the organization where this application or proceeding is assigned is 703-872-9306

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Thong Vu
Patent Examiner
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